#### THUNDERSTORMS.

Description of the more severe thunderstorms reported for the month is given under "Local storms."

Thunderstorms were reported as follows: East of the Rocky Mountains they were reported in the greatest number of states, 38, on the 8th; in 35 on the 15th and 26th; in 34 on the 3d and 17th; in 32 on the 1st, 5th, and 6th; in 31 on the 2d, 16th, and 25th; in 20 to 30 on the 4th, 7th, 9th, 10th, 12th, 13th, 14th, 18th, 19th, 22d, and 27th to 31st; and in 10 to 19 on the 11th, 20th, 21st, 23d, and 24th. There were no dates on which thunderstorms were reported in less than 10 states.

East of the Rocky Mountains thunderstorms were reported on the greatest number of dates, 31, in Florida and Louisiana; on 20 to 30 in Alabama, Arkansas, Georgia, Illinois, Iowa, Kansas, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, and West Virginia; and 25th to 28th.

on 10 to 19 in Connecticut, Delaware, Indiana, Kentucky, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Jersey, North Dakota, Ohio, Vermont, and Wisconsin; on 9 in Oklahoma and Rhode Island; on 8 in the District of Columbia; and on 2 in Indian Territory.

West of the Rocky Mountains thunderstorms were reported in Arizona on the 2d to 7th, 9th, 11th to 24th, and 28th to 31st; in California on the 10th, 12th, 16th, 19th, 20th, 21st, 23d, 24th, and 25th; in Colorado on the 1st, 2d, 3d, 5th to 14th, and 17th to 31st; in Idaho on the 8th, 20th, 22d, 26th, 27th, 28th, and 31st: in Nevada on the 19th to 28th; in New Mexico on the 2d, 3d, 7th to 13th, 15th to 18th, 21st, 26th, 28th, 29th, and 31st; in Oregon on the 2d, 10th, 21st, 26th, 28th, 30th, and 31st; in Utah on the 9th, 10th, 11th, 13th, 15th, 19th to 28th, and 31st; in Washington on the 2d, 8th, 9th, 13th, 15th, 21st, 22d, 29th, 30th, and 31st; and in Wyoming on the 4th, 5th, 6th, 11th, 13th, 14th, 21st, 22d, 23d,

# STATE WEATHER SERVICES.

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for July, 1893, of the directors of the various state weather services:

## ALABAMA.

Temperature.—The mean was 0.2 below the normal; maximum, 103, at Newburg, 28th; minimum, 60, at Brewton, 18th; greatest monthly range, 42, at Brewton; least monthly range, 22, at Livingston and Pushmataha.

Precipitation.—The average was nearly 1.00 below the normal; greatest monthly, 12.22, at Healing Springs; least monthly, 1.10, at Claiborne.

Wind.—Prevailing direction, southwest.—W. M. Dudley, Observer, Weather Bureau, Montgomery, director.

Temperature.—Maximum, 118, at Buckeye, 30th; minimum, 42, at Whipple Barracks, 1st; greatest monthly range, 56, at Buckeye; least monthly range, 33, at Saint Helenas Ranch.

Precipitation.—Greatest monthly, 6.47, at Wilgue; least monthly, 0.50, at

Wind .- Prevailing direction, southwest .- W. Burrows, Observer, Weather Bureau, Tucson, director.

## ARKANSAS.

Temperature.—The mean was 0.5 above the normal; maximum, 103, at Temperature.—The mean was 0.5 above the normal; maximum, 103, at Hot Springs, 28th; minimum, 59, at Marshall, 19th; greatest monthly range, 43, at Hot Springs; least monthly range, 26, at Greenville, Miss.

Precipitation.—The average was 1.12 below the normal; greatest monthly, 7.31, at Rogers; least monthly, 0.51, at Ozark.

Wind.—Prevailing direction, south.—F. H. Clurke, Local Forecast Official, Weather Bureau, Little Rock, director.

## CALIFORNIA.

Temperature.—The mean was 2.0 below the normal; maximum, 122, at Volcano Springs, 10th; minimum, 30, at Cisco, 11th; greatest monthly range

72, at San Ardo; least monthly range, 11, at Poway.

\*\*Precipitation.—The average was 0.02 above the normal; greatest monthly, 1.65, at Julian; least monthly, 0.00, at a number of stations.

Wind.—Prevailing direction, west.—J. A. Barwick, Observer, Weather Bureau, Sacramento, director.

# COLORADO.

Temperature.-The mean was 1.0 above the normal; maximum, 105, at

Minneapolis, 6th; minimum, 28, at Breckenridge, 17th.

Precipitation.—The average was about 0.27 below the normal; greatest monthly, 9.50, at River Bend; least monthly, 0.11, at Grand Junction.

Wind.—Prevailing direction, west.—J. J. Gilligan, Observer, Weather

Bureau, Denver, director.

## FLORIDA.

Temperature.—The mean was about 1.0 above the normal; maximum, 101, at Mullet Key, 18th, and at Bristol. 26th; minimum, 63, at Green Cove Springs, 14th; greatest monthly range, 35, at Plant City; least monthly range, 18, at Key West.

Precipitation.—The average was about 3.00 below the normal; greatest monthly, 12.56, at Oxford; least monthly, 1.20, at Mullet Key.

Wind.—Prevailing direction, southeast.—E. R. Demain, Observer, Weather

Bureau, Jacksonville, director.

# GEORGIA.

Temperature. - Maximum, 108, at Cordele, 25th; minimum, 52, at Dia- range, 49, at Louisa.

mond, 13th; greatest monthly range, 49, at Griffin; least monthly range, 18, at Hephzibah.

Precipitation.—Greatest monthly, 8.21, at Darien; least monthly, 0.86, at Newman.

Wind.—Prevailing direction, west.—Park Morrill, Local Forecast Official, Weather Bureau, Atlanta, director.

Temperature. - Maximum, 104, at Payette, 20th; minimum, 22, at Bonanza City, 7th; greatest monthly range, 71, at Bonanza City; least monthly range,

47, at Kootenai.

Precipitation.—Greatest monthly, 0.94, at Bonanza City; least monthly, trace, at Idaho Falls.

Wind -Prevailing direction, southwest .- J. H. Smith, Observer, Weather Bureau, Idaho Falls, director.

## ILLINOIS.

Temperature.—The mean was 2.0 above the normal; maximum, 102, at McLeansboro, 13th, and at Rantoul, 14th; minimum, 49, at Dixon, 3d.

Precipitation.—The average was 1.26 below the normal; greatest monthly,

4.36, at Oregon; least monthly, trace, at Kankakee.

Wind.—Prevailing direction, southwest.—John Craig, Observer, Weather
Bureau, Springfield, director.

# INDIANA.

Temperature.—The mean was 3.3 above the normal; maximum, 100, at Angola, 13th; minimum, 45, at Columbia City, 4th; greatest monthly range, 50, at Columbia City and Delphi; least monthly range, 24, at Columbus.

Precipitation.—The average was 1.30 below the normal; greatest monthly, 4.77, at Mount Vernon; least monthly, 0.03, at Logansport.

Wind.—Prevailing direction, southwest.—Prof. H. A. Huston, Lafayette, director; C. F. R. Wappenhans, Local Forecast Official, Weather Bureau, assistant.

# IOWA WEATHER AND CROP SERVICE.

Temperature.—The mean was 1.5 above the normal; maximum, 102, at Ames (near), 13th, and at Atlantic, 14th; minimum, 47, at Atlantic, 3d, and at Sibley, 8th; greatest monthly range, 55, at Atlantic; least monthly range, 27, at Maquoketa.

Precipitation.—The average was slightly below the normal; greatest monthly, 8.84, at Clarinda; least monthly, 1.49, at Oskaloosa.—J. R. Sage, Des Moines, director; G. M. Chappel, Local Forecast Official, Weather Bureau. assistant.

## KANSAS.

Temperature.—The mean was 0.8 above the normal; maximum, 110, at Kiowa, 30th; minimum, 47, at Washington, 7th; greatest monthly range, 56,

at Minneapolis; least monthly range, 31, at Lawrence.

Precipitation.—The average was 0.42 above the normal; greatest monthly, 9.28, at Oberlin; least monthly, 0.37, at Grenola.

Wind.—Prevailing direction, south.—T. B. Jennings, Observer, Weather

Bureau, Topeka, director.

# KENTUCKY.

Temperature.—The mean was normal; maximum, 101, at Harrodsburg, 24th, and at Princeton, 28th; minimum, 50, at Louisa, 28th; greatest monthly

8.23, at Middlesboro; least monthly, 1.09, at Paducah.

Wind.—Prevailing direction, southwest.—Frank Burke, Local Forecast

Official, Weather Bureau, Louisville, director.

#### LOUISIANA.

Temperature.—The mean was 0.8 above the normal; maximum, 102, at Oxford, 29th and 31st, and at Schriever, 25th; minimum, 61, at Winnsboro, 22d and 23d; greatest monthly range, 39, at Liberty Hill; least monthly

22d and 23d; greatest monthly range, 55, at Interty Inn, least instancy range, 18, at Port Eads.

Precipitation.—The average was 1.20 below the normal; greatest monthly, 9.49, at Amite; least monthly, 0.00, at Many.

Wind.—Prevailing direction, south.—R. E. Kerkam, Local Forecast Official, Weather Bureau, New Orleans, director.

#### MICHIGAN.

Temperature.—The mean was 0.5 below the normal; maximum, 100, at Berrien Springs (a). 13th; minimum, 33, at Paris, 6th; greatest monthly range, 60, at Mottville; least monthly range, 32, at Olivet.

Precipitation.—The average was 0.35 below the normal; greatest monthly,

5.46, at Boon; least monthly, 0.86, at Highland Station.

Wind.—Prevailing direction, southwest.—E. A. Evans, Local Forecast Official, Weather Bureau, Detroit, director.

#### MINNESOTA.

Temperature.—The mean was 3.2 above the normal; maximum, 104, at Farmington, 23d; minimum, 39, at Sandy Lake Dam, 8th; greatest monthly range, 59, at Crookston; least monthly range, 39, at Rolling Green.

Precipitation.—The average was 0.55 below the normal; greatest monthly, 7.36, at Morris; least monthly, 1.24, at Granite Falls.

Wind.—Prevailing direction, northwest.—E. A. Beals, Observer, Weather Bureau, Minneapolis, director.

## MISSISSIPPI.

Temperature.—The mean was 0.8 above the normal; maximum, 108, at Columbus, 28th; minimum, 54, at Corinth, 10th; greatest monthly range, 46, at Corinth; least monthly range, 17, at Biloxi.

Precipitation.—The average was 0.20 below the normal; greatest monthly,

9.52, at Crystal Springs; least monthly, 1.20, at Palo Alto.

Wind.—Prevailing direction, southeast.—R. J. Hyatt, Local Forecast Official, Weather Bureau, Vicksburg, director.

#### MISSOURI.

Temperature.—The mean was about normal; maximum, 103, at Sarcoxie, 28th; minimum, 51, at Panacea, 11th; greatest monthly range, 48, at Langdon; least monthly range, 27, at Saint Louis.

Precipitation.—The average was 0.98 above the normal; greatest monthly,

18.30, at Lexington; least monthly, 0.30, at Oak Ridge.

Wind.—Prevailing direction, south and southwest.—J. R. Rippey, Secretary, State Board of Agriculture, Columbia, director; H. A. McNally, Observer, Weather Bureau, assistant

## NEBRASKA.

Temperature.—Maximum, 110, at Indianola, 15th; minimum, 41, at Beaver City, 9th; greatest monthly range, 61, at Beaver City; least monthly range, 33, at Nebraska City.

Precipitation.—Greatest monthly, 6.43, at Creighton; least monthly, 0.51,

at Nesbit.

Wind .- Prevailing direction, southeast .- George E. Hunt, Local Forecast Official, Weather Bureau, Omaha, director.

## NEVADA.

Temperature.—The mean was 2.5 below the normal; maximum, 110, at Golconda, 19th; minimum, 24, at Stofiel, 7th, and at Monitor Ranch, 15th.

Precipitation.—The average was 0.11 below the normal; greatest monthly,

1.83, at Palmetto; least monthly, 0.00, at Elko, Mill City, and Halleck.

Wind.—Prevailing direction, southwest.—Prof. Charles W. Friend, Carson

City, director; F. A. Carpenter, Observer, Weather Bureau, assistant.

# NEW ENGLAND.

Temperature.—The mean was 0.6 below the normal; maximum, 98, at Easton, 2d; minimum, 36, at West Milan, 10th and 19th; greatest monthly

range, 57, at Farmington; least monthly range, 26, at Block Island.

Precipitation.—The average was 1.98 below the normal; greatest monthly,
4.77, at Wells and Enosburg Falls; least monthly, 0.90, at Clinton.

Wind.—Prevailing direction, southwest.—J. Warren Smith, Observer, Weather Bureau, Boston, director.

## NEW JERSEY.

Temperature.—The mean was 0.6 below the normal; maximum, 102, at Vineland, 26th, and at Salem, 27th; minimum, 40, at Charlotteburg, 25th; greatest monthly range, 55, at Charlotteburg and Cape May; least monthly range, 35, at Atlantic City.

Precipitation.—The average was 1.60 below the normal; greatest monthly,

4.63, at Oceanic; least monthly, 1.26, at Cape May.

Wind .- Prevailing direction, southwest .- E. W. McGann, Observer. Weather Bureau, New Brunswick, director.

## NEW MEXICO.

Temperature.—The mean was slightly below the normal; maximum, 107,

Precipitation.—The average was 0.37 below the normal; greatest monthly, at Gallinas Spring, 4th; minimum, 35, at Fort Wingate, 27th; greatest

monthly range, 63, at Los Lunas; least monthly range, 33, at La Luz.

Precipitation.—The average was slightly above the normal; greatest monthly, 5.64, at Las Vegas; least monthly, 0.10, at Los Lunas.—H. B. Hersey, Observer, Weather Bureau, Santa Fe, director.

#### NEW YORK.

Temperature.-The mean was normal; maximum, 98, at Eden Center, 8th; minimum, 36, at Angelica, 24th; greatest monthly range, 58, at Eden Center; least monthly range, 30, at Dunkirk.

Precipitation.—The average was 0.91 below the normal; greatest monthly,

Treamulation.—The average was 0.31 below the normal; greatest monthly, 7.09, at Phoenix; least monthly, 1.16, at Oswego.

Wind.—Prevailing direction, southwest.—Prof. E. A. Fuertes, Dean of the College of Civil Engineering, Cornell University, Ithaca, director; R. M. Hardinge, Observer, Weather Bureau, assistant.

# NORTH CAROLINA.

Temperature.—The mean was 0.4 above the normal; maximum, 104, at Chapel Hill, 15th, 16th, and 17th; minimum, 52, at Highlands, 4th; greatest monthly range, 51, at Douglas; least monthly range, 22, at Hatteras.

Precipitation.—The average was 1.52 below the normal; greatest monthly,

8.30, at Wilmington; least monthly, 1.44, at Oak Ridge.

Wind.—Prevailing direction, southwest.—Dr. Herbert B. Battle, Raleigh, director; C. F. von Herrmann, Observer, Weather Bureau, assistant.

# NORTH DAKOTA.

Temperature.—The mean was 0.7 above the normal; maximum, 112, at Medora, 20th; minimum, 85, at Napoleon, 28th; greatest monthly range, 70, at Medora; least monthly range, 41, at Sheyenne.

Precipitation.—The average was 0.82 below the normal; greatest monthly,

4.59, at Wild Rice; least monthly, 0.53, at Medora.

Wind.—Prevailing direction, northwest.—W. H. Fallon, Observer,

Weather Bureau, Bismarck, director.

#### OREGON.

Temperature.—The mean was 1.8 below the normal; maximum, 110, at Newbridge, 31st; minimum, 31, at Sparta, 2d; greatest monthly range, 74, at Newbridge; least monthly range, 24, at Gardiner.

Precipitation.—The average was 0.48 below the normal; greatest monthly,

1.99, at Sparta; least monthly, 0.00, at several stations.

Wind.—Prevailing direction, north.—Hon. H. E. Hayes, Master State
Grange, Portland, director; B. S. Pague, Local Forecast Official, Weather Bureau, assistant.

## PENNSYLVANIA.

Temperature.—The mean was 0.9 above the normal; maximum, 102, at Aqueduct and Quakertown, 26th; minimum, 39, at Dyberry, 11th; greatest monthly range, 60, at Lewisburg; least monthly range, 36, at Philadelphia.

Precipitation.—The average was 1.12 below the normal; greatest monthly, 6.27, at Clarion; least monthly, 1.58, at York.

Wind.—Prevailing direction, west.—Under direction of the Franklin
Institute, Philadelphia; W. P. Tatham, director; H. L. Ball, Observer, Weather Bureau, assistant.

## SOUTH CAROLINA.

Temperature.—Maximum, 104, at Society Hill, 6th, at Kitchings Mills, 17th, at Cheraw, 7th, and at Brewer Mine, 16th; minimum, 60, at Kingstree, 1st, and at Greenville, 29th.

Precipitation.—Greatest monthly, 7.75, at Trial; least monthly, 1.35, at

Wateree.

Wind.—Prevailing direction, southwest.—J. H. Harmon, Observer, Weather Bureau, Columbia, director.

## SOUTH DAKOTA.

Temperature.—The mean was 2.3 below the normal; maximum, 107, at Hotch City, 24th, and at Onida, 23d; minimum, 37, at Cross, 8th; greatest monthly range, 65, at Hotch City; least monthly range, 40, at Mellette.

Precipitation.—The average was 0.63 above the normal; greatest monthly,

4.80, at Fort Sully; least monthly, 0.68, at Brookings.

Wind.—Prevailing direction, southeast.—S. W. Glenn, Local Forecast Official, Weather Bureau, Huron, director.

# TENNESSEE WEATHER AND CROP SERVICE.

Temperature.—The mean was 2.3 above the normal; maximum, 100, at Milan, 29th; minimum, 56, at Hohenwald, 4th, and at Johnson City, 11th; greatest monthly range, 40, at Milan; least monthly range, 22, at Bethel Springs.

Precipitation.—The average was 0.87 below the normal; greatest monthly,

7.04, at Rugby; least monthly, 0.71, at Brownsville.
Wind.—Prevailing direction, southwest.—J. B. Marbury, Local Forecast Official, Weather Bureau, Nashville, director.

Temperature.—The mean was 0.8 above the normal; maximum, 118, at Temperature.—The mean was 0.8 above the normal; maximum, 118, at Corsicana (b), 31st; minimum, 55, at Houston, 10th; greatest mouthly range, 51, at Fort Hancock; least monthly range, 18, at Boerne.

Precipitation.—The average was 1.36 below the normal; greatest monthly, 3.45, at Childress; least monthly, 0.00, at Menardville and Twohig.

Wind.—Prevailing direction, south.—D. D. Bryan, Galveston, director;

I. M. Cline, Local Forecast Official, Weather Bureau, assistant.

## UTAH.

Temperature.—Maximum, 110, at Saint George, 18th; minimum, 24, at Scofield, 18th; greatest monthly range, 69, at Saint George; least monthly range, 47, at Sait Lake City.

Precipitation.—Greatest monthly, 4.50, at Scofield; least monthly, trace,

at Cisco.

Wind. — Prevailing direction, southwest. — G. N. Salisbury, Observer, Weather Bureau, Salt Lake City, director.

#### VIRGINIA.

Temperature. - Maximum, 104, at Nottoway, 8th; minimum, 47, at Lexington, 28th; greatest monthly range, 52, at Nottoway; least monthly range, 27, at Birdsnest.

Precipitation.—Greatest monthly, 9.15, at Saluda; least monthly, 1.14, at

Blacksburg.
Wind.—Prevailing direction, southwest.—Dr. E. A. Craighill, Lynchburg, director; J. N. Ryker, Observer, Weather Bureau, assistant.

#### WEST VIRGINIA.

Temperature.-Maximum, 98, at New Cumberland, 26th; minimum, 42, at Davis, 11th; greatest monthly range, 48, at New Cumberland and Spencer; least monthly range, 30, at Pleasant Hill and Weston.

Precipitation .- Greatest monthly, 5.95, at Martinsburg; least monthly,

0.97, at Kingwood.

Wind.—Prevailing direction, southwest. — W. W. Dent, Observer, Weather Bureau, Parkersburg, director.

## WISCONSIN.

Temperature.-The mean was 1.5 above the normal; maximum, 104, at Osocola, 24th; minimum, 39, at Butternut and Valley Junction, 27th, and at Crandon, 3d, 10th, and 22d.

Precipitation.—The average was 1.00 above the normal; greatest monthly,

7.94, at Westfield; least monthly, 1.21, at Grantsburg.

Wind. — Prevailing direction, southwest.—W. L. Moore, Local Forecast Official, Weather Bureau, Milwaukee, director.

#### WYOMING.

Temperature.-Maximum, 104, at Wheatland, 23d; minimum, 34, at Lusk, 18th; greatest monthly range, 68, at Lusk; least monthly range, 45, at Chey-

Precipitation.—Greatest monthly, 1.75, at Sundance; least monthly, 0.07, at Fort Washakie.

Wind .- Prevailing direction, west .- E. M. Ravenscraft, Observer, Weather Bureau, Cheyenne, director.

# METEOROLOGICAL TABLES.

Meteorological record of voluntary and other co-operating observers, July, 1893.

Meteorological record of voluntary observers, &c .- Continued.

1893.											Thos		77.00		<u> </u>	'For	33 to 0 mo f		
		Temperature. (Fahrenheit.)				Temperature.			į	Stations.	Temperature. (Fahrenheit.)			ecip'n.	Stations.	Temperature (Fahrenheit.		eit.)	ig.d.
Stations.	Max.	Min.	Mean.	Precip'n.	Stations.	lax.	Max.		Precip'		Max	Min	Mear	Prec		Max	Min.	Mean	Precip'n.
·	-	4	<u>  \ \                                 </u>	<u> </u>		2	; <u>≥</u> _	🗷	4	Arkansas-Cont'd.				Ins.	California-Cont'd.		ę	•	Ins.
Alabama	0	۰	•	Ins.	Arizona—Cont'd.	٥	0	0	Ins.	Prescott †	95	68	81.1	1.64	Emigrant Gap *8	85	50	67.9	0.00
Alco Bermuda * † 5	97	67 70	81·5 81·5		Fort Grant Fort Huachuca	104	59	77.9	4.24	Rison†	101	66	82.8	3.01	Evergreen Exeter *8			83-6	0.00
Birmingham †	96 98°	670	83.6	2.44	Gila Bend a † 1	112	55 74	75.6 94.9	4·42 I·45	Russellville†	100	62	6.18	7·31 2·60	Wall Brook#1	اضما	75 54	68.7	0.00
Brewton t	102	60	81.4	4.25	Gila Bend a † 1 Gila Bend b * 8	118	65	95.8	1.20	Stuttgert +	i	60	81.4	2. 14	Karminatan ≢8	ITON I	54 68	82.8	0.00
Camden *1	99	75	84.9	3.48	Holbrook†	99	49 80	74.0	1.65	Texarkana†. Warm Springs *1. Washington b †1	92.	69	83-4	2.30	Felton *8 Fernando *8	105	46	66.7 72.0	0.00
Citronelle† Claiborne Landing†	93	70	81.7		Maricopa*8 Mount Huachuca†.	103	52	94.6 76.2	0.68 4.46	Washington b +1	95	721 68	81.3 <sup>1</sup> 81.1	2.75 2.25			50 60	73.2	0.00
Cordova†				3.69	Natural Bridget				2.43	44 III 210 M - 1	85	66	76.0	2.19	Florin • 8	105	53 64	71.9	0.00
Decaturat				3.68	Oracle†1	100	62	77.8		California.			64.4		Folsom City a*8 Folsom City b*1	107	64	82.8	0.00 T.
Decatur b † Demopolis †	98	61	79.0	3·52 2·73	Oro	105	70	85.4	3·93 1·55	Agnew 1 Alcalde * 8	106	45 59	88.8	0.00	Fort Bidwell	07	65 39	79.9 67.2	0.50
Elba*†¹	70	74	82.4	4.41	Pantano *8 Payson *1	91	58	74.5	0.97	I Angheim 🕶 🗆	120	57	71.7	0.00	French Corral	100	52	76.0	0.00
Eufaulaat	99	70	82.6	5.12	Peoris f	TOO	70	91.ŏ	1.56	Anderson *1 Antioch *8	104	57	76.7	0.14	Fresno *8	105	59 65 62	84.1	0.00
Eufaula c† Florence a†		• • • • • • •		7·39 2·85	Red Rock * 15	110	65	91.7	3.20 3.05	Antoe #8	10-	61 47	76.0 59.5	0.00	Galt *8	105	62	83.3 80.7	0.00
Florence b † 1	97	62	79-7	2.71	Phoenixa† Red Rock*†* Reymert†	105	75 65	83.1	2.76	Arcata †	70d	43ª	59. Id	0.00	( <del>leorgetown f</del>	108 1	46	73-4	T.
Fort Deposit †	100	69	83.0	4.01	∥ Rve†	1			1.08	Arlington Heights.	100	52 65	75.4	0.08	Gilroy *8	103	53 60	69. I	0.00
Gadsden †	98	66	80.7	2.63	St. Helena R'h * † ¹ . San Carlos	95	64	75.6 85.0	4.53 0.80	Athlone *8 Auburn *8	107	59	84·2 78·3	0.00	Gilroy *8	97		75·3	0.00
Healing Springs †	68	62	81.2		∥ San Simon *8	110	59 78	90.3	I. II	i Hakeratielda#8	1.00	70	87.9	0.00	Goshen *8	106	55 64	81.2	0.00
Highland Home t	96	69 68	81-2	6. 18	Show Low				1.16	Bakersfield bt	106	50	78.5	0.00				••••••	T
Livingstonb † Lynna †	100	68	82.3	3.89	Signal † Texas Hill * 8	109	64 82	89.7	0.78	Ballast Point L. H. Beaumont * 8	••••	61	79-9	0.00	Gridley *1	112	64	80. o 64. 3	T.
Marion†	100	68	82.6	4.73	Tombstone t	102	55	95·9 79·6	0.40 4.01	Beaumont *8 Belmont *8 Berendo *8	88	60	72.5	0.00	Healdsburg *1	96	55 46	67.6	0.00
Marion† Maysville†¹	99	69	83.2	1.79	Tucson a† Tucson b * 8	108	70	89.0	2.44	Berendo *8	112	70	89.3	0.00	Hollister *8	93	46	64.5	0.00
Mount willing	99	68	83.2	1.81	Walnut Grove †	105	74	89-1	2.52	Berkeley Bishop Creek *8	77	50		0.00	Hornbrook • 8 Hydesville †	100	56 38	73·2 58·0	0.95
Newburg†	103	70 62	82.8	5.0I 1.90	Walnut Ranch # † 1.	07	63	75· o	2.53	Boca * 8	22	63 38	50.0	1.05	Independence †	101	49	74.8	0.00
Newton fi	98	69 68	83.4	4.58	Walnut Ranch * † 1. Whipple Barracks.	95	42	70.5	1.31	Borden *8 Boulder Creek *8	109	64	59·9 83·0	0.00	Indio #8	1176	75 60	94.8	0.05
Newburg† Newton†! Opelika† Oxanna*†!	99	68	83.4	2.07	Wilgus† Yuma**			•••••	6.47	Brentwood •8	102	47 61	64.3	0.00	Ione®8	105	60 56	80.2	0.00 T.
Pine Apple †	98 TO2	63		1.46	Arkansas.	110	So	95.2	0.40	Reighton # 5		60	77·5 82·4	0.00	Jackson	اكحا	44	74·8 73·8	0.04
Pine Apple † Pushmataha † ¹	93	71	81.1	4-48	Arkadelphia†				3.06	Byron **	108	58	77-8	0.00	Julian †	97	44 56 68	74-0	1.65
ROCK MIIIS	97	64	81.1	6.70	Arkansas City†				2-30	Byron **. Caliente **. Calistoga **	107	68	82.7	0.00	Julian† Keeler *8 Keene *8 Kennedy Gold	98		77.6	0.4!
Sturdevant †		• • • • • •			Ashdown†1 Bee Branch†	99	65 63	80.5 79.6	2.30 1.55	Campo Seco	100	56	78-6	0.00	Kennedy Gold	100	55	75-9	1.05
Talladega † Tallassee Falls †				1.67	∥ Brinkley†	l 06	65	80.4	4.11	C M	1			0.00	Mine *1 King City *8	103	47	73-4	0.00
Tallassee Falls †					Camden a† Camden b † 1				2.85	Capitola*8. Capitola*8. Cantroville*8. Centerville*1. Chico *8. Chino *6. Cisco *8. Citrus *2.	82	52	67.5	0.00	King City *8	94	50 68	65.9	0.00
Thomasville† Tuscaloosa †	l	68	82.4	2.80 1.68	Conway *1	95 93	66 69	79·0	3·73	Centerville *1	72	55	59·9 68·0	0.00	Kingsburg * 8 Knights Landing * 8	108	55	85·8 77·9	0.00
Tuscumbia a * 1	00	71	81.1		Conway *1 Corning †	97	61	80.0	2.80	Chico *8	105	60	77 · I	0.00	Kono Tavee	04	52	74.2	0.00
Tuscumbiaot	100	65 62	82.9	2.29	Dallas †	96	60	79.2	3.55	Chino *6	97	63	78.7	0.26	Lagrange * 5 Lathrop * 8	110	54 60	82.4	0-00
Union Springs a † 1.	101	67	82.6	3.96 1.52	Foretteville†	26	60	*** 3	3·55 4·58	Citrus #2	88	30	61.7 81.2	0.00	Laurel *8	101	50	78.0 68.4	0.00
Union Springs b † Uniontown 1	98	70	82.4	6.11	Dallas † Dardanelle † Fayetteville † Forrest †	98	67	77·2 82·0	4.40			49	71.4	0.20	Lemoore a *8	108	51 62	83.5	0.00
Valley Head ti		64	77-9		Fulton 7				0-77	Colfax *8	102	50	73-9	0.00	Lick Observatory†.	187 I	41	67.9	0.00
Warrior† Wilsonville†	••••			I.70 I.45	Gaines Landing † Hamburg		66	81.0	2.22 3.39	Colfax *8 Colton *8 Colusa †	101	58	77·5 76·4	0.30	Lime Point L H	100	54	70.2	0.00
					Helena a t				5.31	: (:Arning#8	1×~0	54 60	80-7	0.00	Livermore *8 Livingston *8	110	54 60	83.9	0.00
Killisnoo †1	80	47 40	57.1	8- 15	Helena b †	101	64	83.0	3.82	Crescent City Crescent City L. H.			•••••	0.03	Lodi Long Beach *8	99	51	73.4	0.00
Metlakahtla † Arizona.	80	40	57.2	7.18	Hot Springs Keesees Ferry†	103	60 61	82.0 78.6	6.82 4.75	Crofton #8		60	78.7	0.00	Long Beach **	100	52 60	73.2	0.00
Antelone Valley t				1.95	Kirby †	95	62		3.70	Crofton *8 Davisville a *8	105	60	79.0	0.00	Los Angeles *8 Los Banos *8 Los Gatos a*8	105	49	73.1	0.00
Bensou • 8	105	70	86· I		Lonoke * 1	97	70	79·7 83·3	2.25	Leadisailleo	TOT	52	74.7	T.	Los Gatos a *8	100	54	71.6	0.00
Bensou • 8. Bisbee † 1 Buckeye †	90"	60 62	73.8 88.7	5·20 0·70	Kirby † Lonoke * 1 Madding 2 Malvern †	~~~		84.6 79.6	2.41	Delano *8 Delta *8	106	65 60	85.0 79.4	0.00 T.	Los Gatos b Mammoth Tank *8.	93	45 81	65-6 99-0	0.00
Calabasas T	TOA	64	80.6	3.04	Marcella†	102	65 67	83.7	4.82	Downey *8	92	58 62	72.7	0.25	Mare Island L.H				0.00
Uasa Grande #8	III	83	91.2	1.72	Marahall * † 1	TOT	59	81.0	2.95	Delta **. Downey **. Dry Creek *†* Dry town Duarte. Dunnigan **. Dunnigan **.			79.6		Montage #1	Iros I	62	79·4 61·6	т.
Chiricahua Mts† Crittenden *†5	105	61	27.8	3.87	Melbourne† Mount Nebo† New Gascony*1	99	59 63 61	81.4 76.2	4.29	Lirytown	103	47	74-6	0.00	Martinez * 8 Marysville a * 8	86	46 56	61.6 76.8	0.00
Dragoon t			77.8	5. IO 3. 3I	New Gasconv*1	9I 228	7I	70.2 SI.8	2.40	Dunnigan*8	104	53 66	75.0 79.6	0.49	Menlo Park *8	88	50	70.8 66.2	0.00
DISSOURCE DRIBING	1102	70	83·4 86·8	3.92	Newporta:				4.35	Dunsmuir *8. East Brother L. H.	98	49	70.0	0.20	Merced * 8	108	57	79-5	0.00
Dudleyville†	109	65		0.71	Newport of	IOI	66	82.2	4.33	East Brother L. H.	••••			0.00	Middletown * † 1	IOI	55 61	74.9	0.00
Farleys Camp Florence †	104	74 68	89.1 89.8	3.62 3.03	Newport of Osceola † 1	95	62 65	79.6 81.3	3.84 0.69	Edgwood * 8	TOS	50 58	67·3	0.66	Milton (near) *1 Modesto *8	Iro6 I	70	77.8 85.6	0.02
rort apache	l 08	5T	73-4	2.57	Ozark† Pine Bluff†	102	62	82.8	0.51	Elmira * 8. El Verano * 8.	107	58 58	78.6	0.00	Mohave *8 Mokelumne Hill *8	106	70 66	87.6	I-04
Fort Bowie†	IOI	1 60	78.2	2.57 3.69	Pine Bluff† 1	100	70	83.8	0. Õ3	El Verano * 8	J98 .	57	71.9	0.00	Mokelumne Hill **	اا	62f	77.61	
					•														